

What Is Claimed Is:

1. A cable comprising:
a cable core;
a plurality of radio frequency identification elements; and
a sheath covering the cable core and the radio frequency identification elements.
2. The cable according to claim 1, wherein the plurality of radio frequency identification elements are arranged in the cable core.
3. The cable according to claim 1, wherein the plurality of radio frequency identification elements are arranged adjacent to the cable core.
4. The cable according to claim 1, wherein the plurality of radio frequency identification elements are arranged at suitable intervals along a longitudinal direction of the cable core.
5. The cable according to claim 1, wherein the plurality of radio frequency identification elements store identifying information for the cable.
6. The cable according to claim 5, wherein the identifying information can be written in and read out by electromagnetic energy.
7. The cable according to claim 1, further comprising a transmission coaxial cable arranged adjacently along the plurality of radio frequency identification elements.

8. The cable according to claim 7, wherein the transmission coaxial cable is arranged in a slot of the cable core.

9. The cable according to claim 7, wherein the transmission coaxial cable is arranged adjacent to simplex optical cables.

10. The cable according to claim 7, wherein the transmission coaxial cable is superimposed over and coincident with the plurality of radio frequency identification elements.

11. The cable according to claim 7, wherein the transmission coaxial cable comprises an inner conductor and an outer conductor arranged coaxially via an interposed insulating layer.

12. The cable according to claim 11, wherein:

the outer conductor of the transmission coaxial cable has unshielded opening parts for transferring electromagnetic energy; and

each of the radio frequency identification elements is arranged in proximity to each of the unshielded opening parts.

13. The cable according to claim 12, wherein the unshielded opening parts are formed by applying open helically the outer conductor around the outside of the insulating layer maintaining predetermined intervals.

14. The cable according to claim 12, wherein the unshielded opening parts are formed of a plurality of slit parts formed in the outer conductor at equidistant intervals along the longitudinal direction of said cable core.

15. The cable according to claim 1, further comprising:
an integrated member containing the plurality of radio frequency identification elements in a chain.

16. The cable according to claim 15, wherein the integrated member with a chain of radio frequency identification elements comprises a first joining tape having a first joining face and a second joining tape having a second joining face connected to the first joining face so as to sandwich the plurality of radio frequency identification elements between the first joining tape and the second joining tape.

17. The cable according to claim 16, wherein the first and second joining faces are adhered together.

18. The cable according to claim 16, wherein the first and second joining faces are fused together.

19. The cable according to claim 1, wherein the radio frequency identification elements are arranged equidistantly from one another.

20. The cable according to claim 19, wherein the distance between radio frequency identification elements is approximately equal to the maximum transmittable distance between a radio frequency identification element and a read/write device.

21. The cable according to claim 19, wherein the plurality of radio frequency identification elements are arranged helically around the cable core.

22. The cable according to claim 19, wherein the plurality of radio frequency identification elements are arranged longitudinally along the cable core.

23. The cable according to claim 1, further comprising a pair of transmission wires arranged in proximity to the plurality of radio frequency identification elements.

24. The cable according to claim 23, wherein the pair of transmission wires are connected to the plurality of radio frequency identification elements.

25. The cable according to claim 23, wherein the pair of transmission wires comprise:
a plurality of twisted parts formed by the twisting of the two conducting wires; and
a plurality of loop parts each formed by the two conducting wires to be adjacent to respective ones of the plurality of radio frequency identification elements.

26. The cable according to claim 25, wherein the twisted parts and the loop parts are formed alternately along the longitudinal direction of said cable.

27. The cable according to claim 24, further comprising an integrated member containing the plurality of radio frequency identification elements and the pair of transmission wires in a chain,

wherein the integrated member comprises a first joining tape having a first joining face and a second joining tape having a second joining face connected to the first joining face so as to sandwich the plurality of radio frequency identification elements and the pair of transmission wires between said first joining tape and said second joining tape.

28. An integrated member with a chain of RFIDs used for identifying a cable comprising:
a first joining tape having a first joining face;
a second joining tape having a second joining face connected to the first joining face;
a plurality of radio frequency identification elements arranged between said first joining tape and said second joining tape at suitable intervals along a longitudinal direction of the tapes;
and

a pair of transmission wires including two conducting wires arranged between the first joining tape and the second joining tape.

29. An integrated member according to claim 28, wherein the plurality of radio frequency identification elements store cable identifying information for identifying the cable from other cables which can be written in and read out by transmission of electromagnetic energy.

30. An integrated member according to claim 28, wherein the pair of transmission wires comprise:

a plurality of twisted parts formed by the twisting of the two conducting wires; and

a plurality of loop parts each formed by the two conducting wires to be adjacent to respective ones of the plurality of radio frequency identification elements.

31. An integrated member according to claim 30, wherein the twisted parts and the loop parts are formed alternately along a longitudinal direction of the tapes.